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ABSTRACT

The effects of teleconference experiences on the types of concerns expressed by teleconference participants after their initial experiences with the medium were examined using a concerns-based adoption model, which allows researchers to assess changes in levels of concerns expressed by individuals as they become more familiar with an innovation. The South Dakota Medical Information Exchange (SDMIX) studied the utilization of administrative teleconferencing by the state's Alcohol Person Power Project staff. Pre- and post-conferencing questionnaires were used to assess change, and results showed that levels of concern changed after a single exposure to teleconferencing, although not everyone changed. SDMIX conducted another study investigating the effects of a teleconference workshop experience on participants' concerns. The workshop provided information on teleconference presentation design and allowed the development and evaluation of teleconference programs. Levels of concern changed after workshop participation, away from the information and personal levels towards the management and consequence levels. Data tables and 21 references are provided. (Author/LMM)

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EFFECTS OF A TELECONFERENCE EXPERIENCE ON THE TYPE OF CONCERNS EXPRESSED BY TELECONFERENCE PARTICIPANTS

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EFFECTS OF A TELECONFERENCE EXPERIENCE ON THE TYPE OF CONCERNS EXPRESSED BY TELECONFERENCE PARTICIPANTS

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Researchers have long been interested in the behavior of individuals involved in the change process. With the advent of innovative telecommunications systems which are being implemented today in educational institutions, there are opportunities for significant research on the change process in the adoption of sophisticated communication systems. In this article, the authors describe the effects of teleconference experiences on the types of concerns expressed by teleconference participants after their initial experiences with the teleconferencing medium.

BACKGROUND

Innovation is a powerful and pervasive force in our society today. Rogers and Shoemaker (1971) offered the following definition for the term innovation:

> An innovation is an idea, practice, or object perceived as new by an individual. It matters little, so far as human behavior is concerned, whether or not an idea is "objectively" new as measured by the lapse of time since its first use or discovery. It is the preceived or subjective newness of the idea for the individual that determines his reaction to it. If the idea seems new to the individual, it is an innovation (p.19).

Pincus (1974) adds:

> People associated with education often appear to define as innovation any new policy, process, or organizational change....a technology which improves eductional outcomes, improves working relationships or processes within the educational system....or reduces the costs of education without significantly reducing the quality of desired outcomes or processes. (pp. 115-116)

The statements by Rogers and Shoemaker (1971) and Pincus (1974) focused on some of the considerations faced by the staff of the South Dakota Medical Information Exchange (SDMIX) as we established a teleconferencing network in South Dakota. While teleconferencing is not a new instructional medium elsewhere in the nation, it is new to medical education and health care providers within the state of South Dakota.

Change Theory

In general, the literature on change indicates that the adoption of a sophisticated innovation is a gradual process in which individual participants change their attitude towards the innovation and their behavior as they become more familiar with the use of the innovation. (Bennis, Benne, Chin, Corey, 1976; Piele, Eidell & Smith, 1970; Maguire, 1970). Change in a technologically sensitive system is a process, not an event. Hall, in 1976, maintained that the study of change in an educational institution can be accomplished by using the individual as the frame of reference. That is, the degree of the success of the innovation is based on level of use of the innovation by individuals within the institution and the level of the concerns expressed by individuals who use the innovation.

Typically, individuals in the process of change express a variety of concerns which indicate their feeling toward the innovation. According to Hall, Wallace and Dossette (1973), seven levels or stages of concerns are observable during the adoption of any innovative program or project. See Figure 1. A profile of several different levels of concerns can be observed for each individual involved in the innovation. Over a period of time, it is expected that the profile will change indicating that the individual has progressed from lower level informational concerns to personal concerns and finally to impact level concerns. Research by Hall and others leads to the development of the concerns base adoption model.

The model can be used to develop research studies which assess the changes in the levels of concerns expressed by individuals as they become more familiar with an innovation. In addition, the model can be used as a guide for a change facilitator attempting to choose appropri-

ate intervention strategies to accelerate the acceptance of an innovation. The importance of this to instructional developers and change facilitators is that the model provides them a tool which they can use to assess the current level of concerns of individuals involved in the change process and then prescribe experiences which focus on specific concerns. Use of the model in this sense makes it a valuable diagnostic and prescriptive tool in the change process. (Hall 1976, Hall & Loucks, 1977, 1978a, 1978b; Hall, Zigarmi, & Hord 1979). The concerns based adoption model with its stages of concerns hierarchy has been used to design numerous research studies. (Hall, 1979). These studies have been used to validate assessment methodologies which include questionnaires, multiple choice tests, interviewing techniques, and other unobtrusive measures for gathering experimental data.

User Needs

To bring about the adoption of teleconferencing as a viable instructional tool, SDMIX has proceeded in a systematic manner. The first step was to assess the needs of potential users. Fullan (1972) has stated that in order for change to occur the user's needs must be addressed. The principle need identified was the ability to provide continuing medical education by the School of Medicine faculty to South Dakota physicians. Further, the faculty wanted these programs to be delivered cost-effectively throughout the state. This has been a perennial problem because South Dakota is a very large, rural state.

Through various techniques including faculty development workshops, SDMIX has attempted to demonstrate how instructional teleconferencing can address these problems. Eraut (1975) states:

> Unless an educator perceives some discrepancy between his goals and his achievements, he is bound to regard innovation as undesirable and unnecessary; and the extent to which his expressed dissatisfaction is fundamental or trivial will determine the extent to which he is likely to entertain innovation. If an educator does not have a problem, innovation will seem irrelevant. (p. 14)

The authors of this paper decided to employ the concerns base adoption model and questionnaires to assess the effects initial teleconference experiences have on the types of concerns expressed by teleconference participants. The two studies reported herein were viewed as exploratory field studies. The purpose of these studies was to lay the foundation for later, more systematic research on the concerns of teleconference users as they become involved in teleconferencing.

ADMINISTRATIVE TELECONFERENCE STUDY

The first study reported in this article explains the results from a field study regarding the utilization of administrative teleconferencing by University of South Dakota Alcohol and Drug Abuse Studies Program for South Dakota's Alcohol Person Power Project staff. Administrative teleconferencing is defined by the authors as the use of telephone based communication to bring together people for the purpose of conducting a meeting. The staff of the Alcohol Person Power Project was experimenting with teleconferencing in order to provide outreach services to 52 primary alcohol treatment service units throughout South Dakota. The data obtained from this study was used to make decisions regarding the future use of administrative teleconferencing for primary alcohol treatment service program administrators in South Dakota.

There are a number of factors that precipitated the utilization of teleconferencing for the Alcohol Person Power Project. First, because of South Dakota's size and sparce population, many of the 52 primary service units are located in geographically isolated areas throughout South Dakota. Second, staff personnel believed it would take approximately two full weeks to visit all of the state's facilities with no guarantee that the effectiveness would be any greater than by contacting the sites by teleconference. Third, the amount of time it would take to coordinate a two week trip to every facility throughout the state would have been greater than the actual time spent at the facilities. Fourth, project staff had previously contacted approximately 40 percent of the administrators, and it was felt that they would be comfortable discussing problems, issues, and concerns via teleconferencing. Finally, the statewide teleconference provided a unique opportunity to connect program directors and allow them to interact with other program directors; in the past, constraints, including great distance, time, or financial considerations had precluded contact.

The project staff spent a considerable amount of time preparing for the teleconferences. A meeting was held with the SDMIX staff regarding the use of teleconferencing for administrative purposes. SDMIX staff provided information on the design, development and delivery of teleconference presentations. After discussions with all staff personnel and the teleconference consultants, an agenda was formulated. The planning group decided to conduct a series of nine teleconferences during three days connecting five or six alcohol program directors per teleconference.

Procedures for the Administrative Teleconference Study

A letter was sent to each of the alcohol program directors regarding the date, time, and specifics of teleconferencing. In addition, a questionnaire to assess participant concerns about teleconferencing was sent. The participants were provided the telephone number to call to

access the conference bridge operator. They were also provided a telephone number if the teleconferencing connection could not be made on the scheduled date and time.

The questionnaire used to assess the pre-teleconference concerns of the participants was developed from an extensive list of concerns that had been expressed by previous teleconference participants. Professional staff of the SDMIX compiled this listing of concerns from interviews with previous teleconference participants and presenters, and from comments which appeared on the evaluations of previous teleconferences. The most frequently expressed concerns were selected for the questionnaire. A panel of three experts then classified these concerns according to Hall's (1979) levels of concern. The concerns expressed by previous teleconference participants, the level of concern, and the average concern level ranking appear in Table 1.

During the teleconference, information was presented regarding the Alcohol Person Power Project. Participants were given the opportunity to ask questions about the project, and encouraged to interact with any of the other participants. At the conclusions of the teleconferences, participants were notified that they would be receiving a post-concerns form about teleconferencing. The purpose of the post-form was to assess change in participants' concerns regarding teleconferencing.

Results of the Administrative Teleconference Study

During the three-day period of the administrative teleconferences, 21 of the 52 (40%) directors participated. Eleven individuals (21%) indicated that they were not able to participate in the teleconference at the scheduled times. Another 20 individuals (38%) did not respond to the initial questionnaire. Most participants had no previous experience with teleconferencing and therefore were concerned primarily with teleconference usage issues while a few had some limited experience with teleconferencing in the past and felt more comfortable with the experience.

Fourteen of the 52 program directors responded to the pre-concerns form producing 109 concerns. The average concerns per respondent were 7.78. Table 2 lists the frequency of each concern marked by the participants on the pretest. The distribution indicates that the respondents expressed concerns according to the different stages discussed by Hall (1979). Fifteen percent of the concerns were informational, 60 percent were personal, 12 percent were management and 13 were consequence oriented. See Table 3. The results suggest that prior to the teleconference, participants seem concerned with the lower level concerns; however, a few participants were concerned with upper level concerns which may reflect their prior experience and familiarity with teleconferencing.

Of the 21 teleconference participants, 17 returned their post-concerns form. There were a total of 81 concerns or an average of 4.76 expressed concerns per respondent. In Table 3, column two, the post-teleconference concerns distribution is presented.

The results displayed in Tables 2 and 3 suggested that the levels or stages of concern expressed by participants changed after a single exposure to the teleconferencing medium. Not every individual changed but there was a change in the entire sample frequency distribution of concern levels. Five percent of the post-teleconferencing concerns were informational, 54 percent were personal, 20 percent were management and 21 percent were consequence type concerns.

The authors recognize the limitations associated with studying change scores from pretest/post-test measures as discussed by Cronbach and Furby (1970). However, the authors were forced to accept this approach because it was not possible to gain participant cooperation to conduct a true experimental study. For this reason the authors conducted an exploratory study to gather prelimnary data which will be used to develop a more comprehensive study at a later date.

TELECONFERENCE WORKSHOP STUDY

After the administrative teleconference exploratory study, the authors decided to conduct another exploratory study investigating the effects of a teleconference workshop experience on the type of concerns which participants express. The staff of SDMIX developed a teleconferencing workshop entitled "Teach Via Teleconferencing". The purpose of the workshop was to familiarize participants with the medium of teleconferencing, to teach participants how to design a teleconference presentation, and to train participants to operate the teleconference equipment.

Workshop Organization

The SDMIX teleconference workshop was designed to address both the needs and concerns of the participants. It was based on a plan derived from the change model of Havelock (1973) and the concerns based adoption model of Hall (1979). The five stage SDMIX workshop plan follows:

1. Determining Presenter Needs and Concerns
2. Creating Awareness and Interest in Teleconferencing
3. Providing Information about Teleconferencing
4. Teaching Teleconferencing Techniques

5. Changing Presenter Attitudes and Behaviors

Determining Presenter Needs and Concerns

As mentioned earlier, SDMIX staff used interviews and questionnaires to assess the needs and concerns of presenters. Again those concerns expressed most frequently related to instructional effectiveness and technical capabilities of teleconferencing. These concerns were manifested in such statements as:

1. It is not as good as face-to-face instructions.
2. People don't understand what is being taught.
3. The equipment might breakdown.
4. I sense a lack of control.
5. How much can I effectively cover during a teleconference.
6. Teleconferencing is not spontaneous.
7. Is my presentation good enough for teleconferencing.

From the above concerns SDMIX developed various presentation segments and learning activities within the workshop to address these concerns.

Creating Awareness and Interest for Teleconferencing

At this stage, the potential user is exposed to the new idea but does not necessarily learn specific information. The presentation is stimulating and positive because the method in which the teleconferencing is presented to the user will affect whether or not he is motivated enough to follow through to the subsequent adoption of the innovation. It is at the awareness stage that the change agent wants to present the innovation in a manner which arouses curiosity. (Havelock, 1973).

Prior to the faculty development workshops, there were several strategies SDMIX used to generate interest in teleconferencing. The SDMIX staff sponsored news conferences, provided press releases, and made presentations to organizations and institutions statewide. SDMIX staff also released pre-workshop publicity which included brochures, newsletters, announcements and word of mouth.

The workshop opens with a multi-media overview of the workshop which delineates the goals of the workshop, highlights each workshop segment, and introduces the workshop faculty. The multi-media opening was designed to set the mood for the rest of the workshop; interesting,

entertaining, and informative. The goal was to create interest and to generate enthusiasm about the workshop.

Providing Information about Teleconferencing

After the workshop opening, a rationale for using teleconferencing is presented. At this time the participants are provided information which demonstrates how teleconferencing can meet their needs. Time and distance barriers and the high cost of travel affecting the delivery of continuing medical education are discussed. In addition to the travel cost issue, the issue of employee productivity is introduced. Participation in continuing medical education programs can be costly for physicians not only in terms of travel cost but also in terms of time away from their practice. It is demonstrated convincingly that teleconferencing is a means of reducing the loss of productive time associated with travel.

Teaching Teleconferencing Techniques

Training teleconference presenters about appropriate teleconference techniques is essential to the adoption of instructional teleconferencing. Gross et al (1971) suggests that failure to implement an innovation is often attributable to the number of obstacles faced by the user in attempting to carry it out. One such obstacle is the appropriate use of the innovation. It is at this point in the workshop that guidelines useful in designing teleconferences are presented. Strategies on how to structure teleconferences, to increase participant interaction during teleconferences, and to personalize teleconferences are discussed. Much of the content is presented via teleconference to reduce participant concern over the effectiveness of instructional teleconferencing.

Also during this segment on the proper use of teleconferencing, the selection and utilization of support materials is discussed. Support materials include handouts, slides, films, overheads, and videotapes. The use of support materials adds the visual component which is missing in teleconferencing and helps to gain and maintain attention during the teleconference.

Changing Presenter Attitudes and Behaviors

The resolution of a user's concerns regarding implementation of the innovation, often requires a change in user attitude and the development of new skills by the user. If changes in attitudes and skill level are not part of the change process, the user will experience frustration and will reject the innovation (Fullan, 1972). Goodlad and Klein (1974) offer a similar observation:

> Since educators usually are only exposed to ideas, whatever the intended change, and have not yet internalized their full meaning before being on their own with the ideas, it is not surprising that there appears to be a gap between what they think they are doing and what we saw them doing. (p. 103)

In accordance with the suggestions of Fullan, Goodlad, and Klien, the workshop staff separates workshop participants into small groups and assists them as they design their own fifteen minute teleconference. This segment of the workshop is intended to provide the participants with the skills necessary to develop teleconference presentations and hopefully create a positive attitude toward teleconferencing.

The first step in this process includes: the identification of the content area, the presenter, the intended audience, and the goals and objectives of the presentation. Next the workshop staff assists the group in: narrowing the topic to fit a fifteen minute time period, developing a content outline, specifying support materials and planning strategies to encourage participant interaction. The final step is to establish the criteria for evaluation and develop an instrument/procedure to assess whether or not the criteria has been met. In addition to designing a teleconference, participants are given hands on experience in setting up the teleconference equipment, dialing into the SDMIX network, and talking to other locations using the teleconference system. It is anticipated that these experiences will help reduce the concerns of users about teleconferencing and thus increase the probability of adopting this innovation.

The final strategy employed by SDMIX to reduce user concerns is to have the participants present a fifteen minute segment designed during the first day of the workshop via teleconferencing. Because the participants are encouraged to use support materials, e.g., slides, handouts, videotapes, this segment of the workshop typically takes place three weeks after the first day of the workshop. Each participant must access the SDMIX network from his location around the state. This segment of the workshop is designed to be as realistic as possible. The workshop participants follow the same protocols they would follow if they were presenting a statewide network program. Each participating location has a moderator who welcomes the other participants, conducts a roll call of all the participating locations, presents an overview of the program, and introduces the instructor. The participants present their topics following the suggestions from the first day of the workshop. When the faculty member has presented his/her program, the moderator reviews the key points of the program and participants are encouraged to ask questions of the presenter. After each presentation, the workshop staff and the other participants provide feedback to the presenter regarding the quality of the program. The feedback session is kept positive and constructive so as not to discourage the presenter from using teleconferencing in the future.

The goal of the workshop is to provide faculty with the skills and experiences necessary for developing effective teleconferences. This is accomplished in two phases. The first phase of the workshop provides the participants with information pertaining to the effective design of a teleconference presentation and leads to the development of a fifteen minute teleconference program. The second phase, which occurs three weeks later, is dedicated to the presentation and critique of the teleconference programs which were developed during the first phase of the workshop. In order to assess the effects of the above workshop experience on user concerns, the following research question was addressed during the workshops. What effect does a teleconference workshop have on user concerns?

Results of the Teleconference Workshop Study

Prior to the workshop, participants were mailed a copy of the same concerns inventory which was used for the administrative teleconference study. After the day long workshop, the participants filled out the post workshop concerns questionnaire. Eleven of the workshop participants responded to the pre-concerns form producing 86 concerns. The average concerns per respondent were 7.82. See column one of Table 4 for a listing of the frequence of each concern marked by the participants.

The distribution indicates that the respondents expressed concerns according to the different stages discussed by Hall. Nine percent of the concerns were informational, 64 percent were personal, 19 percent were management and eight percent were consequence oriented. See Table 5. This suggests that prior to the teleconference, participants seem concerned with the lower level concerns; however, a few participants were concerned with upper level concerns which may reflect their prior experience and familiarity with teleconferencing.

Of the teleconference workshop participants, 10 returned their post-concerns form. There were a total of 68 concerns or an average of 6.8 expressed concerns per respondent. In Table 4, column two, the post-teleconference concerns distribution is presented.

The results displayed in Tables 4 and 5 suggested that the levels or stages of concern expressed by participants changed after their participation in the teleconference workshop. Not every individual changed but there was a change in the entire sample frequency distribution of concern levels. Seven percent of the post-teleconferencing concerns were informational, 59 percent were personal, 24 percent were management and 10 percent were consequence type concerns.

IMPLICATIONS FOR TELECONFERENCING

The concerns based adoption model predicts that individuals are most likely to develop concerns at the awareness, informational and personal levels in the early stages of adoption. The results of these exploratory studies support that assumption. Moreover, after an initial exposure to an innovation, it is anticipated that the distribution of the levels of concerns expressed by the individuals will change. In these exploratory studies, on the average, participants reported more concerns prior to the teleconference than after the teleconference and the distribution of the levels of concerns expressed changed considerably. After the teleconference experience, the distribution of concerns shifted towards the management and consequence level of concerns away from the informational and personal levels of concerns.

It is anticipated that with additional exposures to the teleconference medium, the levels of concerns expressed would move further towards the impact concern levels of consequence, collaboration and refocusing as predicted by the concerns based adoption model. However, it should be noted that the transition from lower level concerns to higher level impact concerns frequently takes two or three years in a sophisticated innovation according to Hall (1979).

The concerns based adoption model can be used by a change facilitator to monitor the level of acceptance of the innovation by the individuals involved in the change process. This type of information makes it possible for the change facilitator to specify individualized intervention strategies which can help the individual participant accept and adapt the innovation. The utilization of the concerns based adoption model to specify interventions makes it a viable diagnostic and prescriptive model for facilitating the acceptance of innovations such as teleconferencing.

It has been emphasized that this article describes an exploratory field study conducted by the SDMIX to assess the concern of teleconference users. Field studies are typically conducted by researchers to determine the "significant variables in the field situation, to discover relations among variables, and to lay the groundwork for later, more systematic and rigorous testing of hypotheses" (Kerlinger, 1973, p. 406). The field studies conducted by SDMIX will be used for the purposes described by Kerlinger. The results of the above field studies have been used to refine and reduce the the questionnaires used to assess teleconference participant concerns.

The results from these studies suggest that a user's concerns will change after being exposed to a teleconference situation. The results were stated in terms of "gain scores" or negative change indicating a reduction in the amount of concern (e.g. subtracting post-test from

pre-test). Scores of this nature are often highly unreliable and rarely useful (Cronbach and Furby, 1970). However the emphasis of this study was to determine the types of concerns experienced by teleconference users for the purpose of bringing about the acceptance of teleconferencing, establishing future research questions, and designing more systematic research procedures. The South Dakota Medical Information Exchange staff has effectively used the information obtained from these exploratory studies to design and implement faculty development workshops and other training activities which successfully address faculty needs and concerns.

STAGES OF CONCERN ABOUT THE INNOVATION

0. AWARENESS: Little concern about our involvement with the innovation is indicated.

1. INFORMATIONAL: A general awareness of the innovation and interest in learning more detail about it is indicated. The person seems to be unworried about himself/herself in relation to the innovation. He/she is interested in substantive aspects of the innovation in a selfless manner such as general characteristics, effects and requirements for use.

2. PERSONAL: Individual is uncertain about the demands of the innovation, his/her inadequacy to meet those demands, and his/her role with the innovation. This includes analysis of his/her role in relation to the reward structure of the organization, decision making and consideration of potential conflicts with existing structure or personal commitment. Financial or status implications of the program for self and colleagues may also be reflected.

3. MANAGEMENT: Attention is focused on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organization, managing, scheduling, and time demands are utmost.

4. CONSEQUENCE: Attention focuses on impact of the innovation on student in his/her immediate sphere of influence. The focus is on the relevance of the innovation for students, evaluation of student outcomes, including performance and competencies, and changes needed to increase student outcomes.

5. COLLABORATION: The focus is on coordination and cooperation with others regarding use of the innovation.

6. REFOCUSING: The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. Individual has definite ideas about alternatives to the proposed or existing form of the innovation.

Figure 1. Stages of Concern about the Innovation. Original concept from G.E. Hall, R.C. Wallace, Jr., and W.A. Dossette. A developmental conceptualization of the adoption process within educational institutions. Austin: Research and Development Center for Teacher Education, The University of Texas, 1973.

TABLE 1

CONCERNS OF ADMINISTRATIVE TELECONFERENCE PARTICIPANTS*

Concern	Average Ranking	Level
Don't like something around my neck, like a microphone	1.0	Info.
How much do I need to know	1.3	Info.
What are appropriate/inappropriate behaviors	1.3	Info.
Who can I address on the teleconference	1.3	Info.
Do I need a special room for teleconference	1.6	Info.
I feel powerlessness	2.0	Pers.
I do not know who is there	2.0	Pers.
I need a picture of person conversing with	2.0	Pers.
I feel I should know what other people look like	2.0	Pers.
How prepared do I need to be not to look like a fool	2.0	Pers.
Is it possible to teach teleconferencing skills	2.0	Pers.
Being isolated what do I do in problem situations	2.0	Pers.
What do I do if anything goes wrong	2.0	Pers.
How do I deal with interruptions	2.0	Pers.
Do I start and end at an exact time	2.0	Pers.
Is the teleconference confidential	2.0	Pers.
Am I being evaluated by someone	2.0	Pers.
Is the transmission quality good	2.3	Pers.
If the phone goes dead at a key point how do I obtain information	2.3	Pers.
What if the line is busy when I call in	2.3	Pers.
Only one person talks at a time	2.6	Pers.
I sense lack of control in the situation	2.6	Pers.
I do not know who has left	2.6	Pers.
How much can you effectively cover in a teleconference	2.6	Pers.
There are no visual aids such as body language	2.6	Pers.
The equipment might break down	3.0	Manage.
It is not as good as a telephone conversation	3.0	Manage.
Is my presentation good enough for the network's standards	3.0	Manage.
How many people come to teleconference prepared	3.0	Manage.
Teleconferencing is not spontaneous	3.0	Manage.
How much experience do I need to become effective	3.6	Manage.
What kinds of people are prepared	3.6	Manage.
It is not as good as face to face	4.0	Conseq.
Do people understand what is being said	4.0	Conseq.

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TABLE 2

CONCERNS OF ADMINISTRATIVE TELECONFERENCE PARTICIPANTS

Concern	Pre-Score	Post-Score
Don't like something around my neck, like a microphone	1	0
How much do I need to know	4	1
What are appropriate/inappropriate behaviors	4	1
Who can I address on the teleconference	4	2
Do I need a special room for teleconference	3	0
I feel powerlessness	0	1
I do not know who is there	4	0
I need a picture of person conversing with	0	0
I feel I should know what other people look likr	2	0
How prepared do I need to be not to look like a fool	4	1
Is it possible to teach teleconferencing skills	4	3
Being isolated what do I do in problem situations	1	0
What do I do if anything goes wrong	2	0
How do I deal with interruptions	3	2
Do I start and end at an exact time	2	1
Is the teleconference confidential	3	4
Am I being evaluated by someone	5	1
Is the transmission quality good	9	7
If the phone goes dead at a key point how do I obtain information	4	2
What if the line is busy when I call in	1	0
Only one person talks at a time	0	2
I sense lack of control in the situation	3	1
I do not know who has left	3	3
How much can you effectively cover in a teleconference	8	8
There are no visual aids such as body language	8	8
The equipment might break down	2	0
It is not as good as a telephone conversation	0	1
Is my presentation good enough for the network's standards	1	1
How many people come to the teleconference prepared	4	5
Teleconferencing is not spontaneous	2	4
How much experience do I need to become effective	3	2
What kinds of people are prepared	1	3
It is not as good as face to face	11	11
Do people understand what is being said	3	6

TABLE 3
DISTRIBUTION OF LEVEL OF CONCERNS EXPRESSED
FOR PRE AND POST TELECONFERENCE EXPERIENCE

Concern Level	Pre Teleconference (n=14)	Post Teleconference (n=17)
Informational	15%	5%
Personal	60%	54%
Management	12%	20%
Consequence	13%	21%
	100%	100%

TABLE 4
CONCERNS EXPRESSED BY TELECONFERENCE WORKSHOP PARTICIPANTS

Concern	Pre-Score	Post-Score
Don't like something around my neck, like a microphone	0	0
How much do I need to know	2	1
What are appropriate/inappropriate behaviors	2	4
Who can I address on the teleconference	3	0
Do I need a special room for teleconference	1	0
I feel powerlessness	1	0
I do not know who is there	5	1
I need a picture of person conversing with	1	0
I feel I should know what other people look like	2	2
How prepared do I need to be not to look like a fool	1	1
Is it possible to teach teleconferencing skills	4	0
Being isolated what do I do in problem situations	3	5
What do I do if anything goes wrong	2	5
How do I deal with interruptions	4	3
Do I start and end at an exact time	1	0
Is the teleconference confidential	2	3
Am I being evaluated by someone	1	1
Is the transmission quality good	5	1
If the phone goes dead at a key point how do I obtain information	5	5
What if the line is busy when I call in	1	2
Only one person talks at a time	2	1
I sense lack of control in the situation	1	0
I do not know who has left	6	2
How much can you effectively cover in a teleconference	6	7
There are no visual aids such as body language	2	1
The equipment might break down	6	5
It is not as good as a telephone conversation	0	0
Is my presentation good enough for the network's standards	2	2
How many people come to teleconference prepared	3	5
Teleconferencing is not spontaneous	1	1
How much experience do I need to become effective	3	2
What kinds of people are prepared	1	1
If is not as good as face to face	3	2
Do people understand what is being said	4	5

TABLE 5
DISTRIBUTION OF LEVEL OF CONCERNS EXPRESSED
FOR PRE AND POST WORKSHOP EXPERIENCE

Concern Level	Pre Workshop (n=11)	Post Workshop (n=10)
Informational	9%	7%
Personal	64%	59%
Management	19%	24%
Consequence	8%	10%
	100%	100%

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